

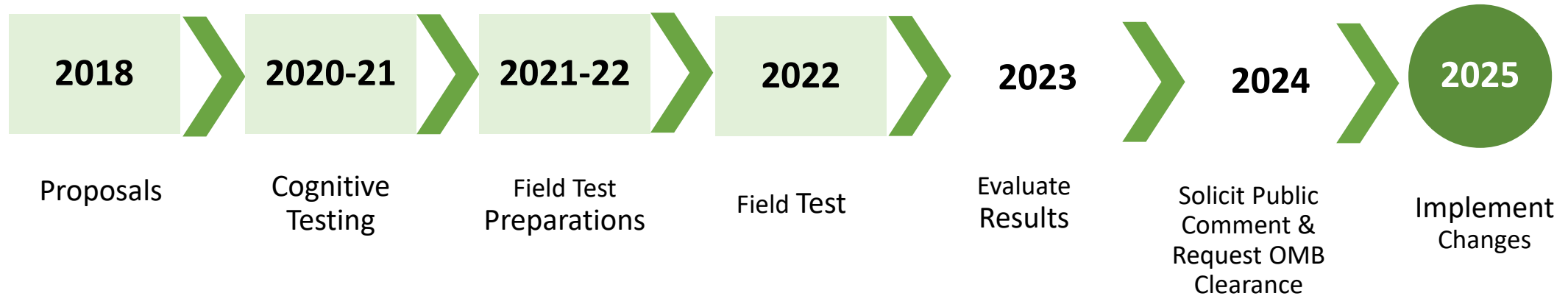
2022 American Community Survey Content Test Results

National Advisory Committee

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2022 Content Test Process and Timeline



Experimental Design

Topic	Control Treatment	Test Treatment	Roster Test Treatment
Household Roster	Production	Production	Test Version
Sewer (NEW)	Test Version	Test Version	Test Version
Electric Vehicles (NEW)	Test Version 1	Test Version 2	Test Version 1
Solar Panels (NEW)	Test Version	Test Version	Test Version
SNAP	Production	Test Version	Test Version [†]
Educational Attainment	Production	Test Version	Production
Health Insurance Coverage	Production	Test Version 1	Test Version 2
Disability	Production	Test Version	Production
Labor Force	Production	Test Version 1	Test Version 2
Income	Production	Test Version 1	Test Version 2

† The SNAP Test Version was in both test treatments to align with Labor Force and Income that also have a reference period change to the previous calendar year.

- **BLUE** topics had two versions tested.
- **RED** topics had three versions tested.

Analysis Metrics for Content Test Topics

- Benchmarks
- Item Missing Data Rates
- Response Distributions
- Response Reliability - *Gross Difference Rate (GDR) and Index of Inconsistency (IOI)*
- Other Metrics (Topic-Specific)

Household Roster

Control

How many people are living or staying at this address?

- **INCLUDE** everyone who is living or staying here for more than 2 months.
- **INCLUDE** yourself if you are living here for more than 2 months.
- **INCLUDE** anyone else staying here who does not have another place to stay, even if they are here for 2 months or less.
- **DO NOT INCLUDE** anyone who is living somewhere else for more than 2 months, such as a college student living away or someone in the Armed Forces on deployment.

Number of people

Test Version

How many people, including yourself, live or stay at this address?

INCLUDE ...

- ✓ anyone not related to you, like roommates and other families.
- ✓ babies and children, related or unrelated, including grandchildren and foster children.
- ✓ everyone staying here now who has no other place to stay.

DO NOT INCLUDE anyone living somewhere else, such as...

- ✗ a college student living away.
- ✗ someone in the Armed Forces on deployment.

Number of people

Household Roster Results

Measure	Version That Performed Better
Young Children 0-4 on Final Roster	No significant difference
Households with Roster Mismatches	No significant difference
People with Tenuous Connection to Household	No significant difference
Complex Households	Test Version
Count Discrepancies (mail mode)	Test Version
Complete Item Missing Data Rate (mail mode)	Test Version
People Originally Added then Kept on Final Roster	Test Version

Recommend moving forward with the Test Version.

Educational Attainment

Control

What is the highest degree or level of school this person has **COMPLETED**? Mark (X) **ONE** box. If currently enrolled, mark the previous grade or highest degree received.

NO SCHOOLING COMPLETED

☐ No schooling completed

NURSERY OR PRESCHOOL THROUGH GRADE 12

☐ Nursery school

☐ Kindergarten

☐ Grade 1 through 11 – Specify grade 1 – 11

☐ 12th grade – **NO DIPLOMA**

HIGH SCHOOL GRADUATE

☐ Regular high school diploma

☐ GED or alternative credential

COLLEGE OR SOME COLLEGE

☐ Some college credit, but less than 1 year of college credit

☐ 1 or more years of college credit, no degree

☐ Associate's degree (for example: AA, AS)

☐ Bachelor's degree (for example: BA, BS)

AFTER BACHELOR'S DEGREE

☐ Master's degree (for example: MA, MS, MEng, MEd, MSW, MBA)

☐ Professional degree beyond a bachelor's degree (for example: MD, DDS, DVM, LLB, JD)

☐ Doctorate degree (for example: PhD, EdD)

Modified

Replaced by "Less than grade 1"

Test Version

What is the highest grade of school or degree this person has **COMPLETED**? If currently enrolled, select the previous grade or highest degree received. Mark (X) **ONE** box.

LESS THAN GRADE 1

☐ Less than grade 1

GRADE 1 THROUGH GRADE 12

☐ Grade 1 through 11 – Specify grade 1 – 11

☐ 12th grade – **NO DIPLOMA**

HIGH SCHOOL GRADUATE

☐ Regular high school diploma

☐ GED or alternative credential

COLLEGE OR SOME COLLEGE

☐ Some college credit, but less than 1 year of college credit

☐ 1 or more years of college credit, no degree

☐ Associate's degree (for example: AA, AS)

☐ Bachelor's degree (for example: BA, BS)

AFTER BACHELOR'S DEGREE

☐ Master's degree (for example: MA, MS, MEng, MEd, MSW, MBA)

☐ Professional degree beyond a bachelor's degree (for example: MD, DDS, DVM, LLB, JD)

☐ Doctorate degree (for example: PhD, EdD)

Educational Attainment Results

Measure	Version That Performed Better
People with Educational Attainment less than grade 1	Test Version
Nominally Closer to CPS ASEC for less than grade 1	Test Version
Item Missing Data Rate	Control
Gross Difference Rate (GDR) for less than grade 1	Test Version

Recommend moving forward with the Test Version.

Health Insurance Coverage

Control

Is this person CURRENTLY covered by any of the following types of health insurance or health coverage plans? Mark "Yes" or "No" for EACH type of coverage in items a – h.

- | | Yes | No |
|---|--------------------------|--------------------------|
| a. Insurance through a current or former employer or union (of this person or another family member) | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Insurance purchased directly from an insurance company (by this person or another family member) | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Medicare, for people 65 and older, or people with certain disabilities | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Medicaid, Medical Assistance, or any kind of government-assistance plan for those with low incomes or a disability | <input type="checkbox"/> | <input type="checkbox"/> |
| e. TRICARE or other military health care | <input type="checkbox"/> | <input type="checkbox"/> |
| f. VA (enrolled for VA health care) | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Indian Health Service | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Any other type of health insurance or health coverage plan – <i>Specify</i> ↴ | <input type="checkbox"/> | <input type="checkbox"/> |

Test Version 1

Is this person CURRENTLY covered by any of the following types of health insurance or health coverage plans?

Do NOT include plans that cover only one type of service, such as dental, drug, or vision plans.

Mark "Yes" or "No" for EACH type of coverage in items a – h.

- | | Yes | No |
|---|--------------------------|--------------------------|
| a. Insurance through a current or former employer, union, or professional association (of this person or another family member) | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Medicare, for people 65 and older, or people with certain disabilities | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Medicaid, Children's Health Insurance Program (CHIP), or any kind of government-assistance plan for those with low incomes or a disability | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Insurance purchased directly from an insurance company; a broker; or a State or Federal Marketplace, such as Healthcare.gov | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Veteran's health care (enrolled for VA) | <input type="checkbox"/> | <input type="checkbox"/> |
| f. TRICARE or other military health care | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Indian Health Service | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Any other type of health insurance or health coverage plan – <i>Specify</i> ↴ | <input type="checkbox"/> | <input type="checkbox"/> |

Test Version 2

Is this person CURRENTLY covered by any of the following types of health insurance or health coverage plans? *Do NOT include plans that cover only one type of service, such as dental, drug, or vision plans.*

YES, INSURED

Mark (X) for all that apply.

- ☐ Insurance through a current or former employer, union, or professional association (of this person or another family member)
- ☐ Medicare, for people 65 and older, or people with certain disabilities
- ☐ Medicaid, Children's Health Insurance Program (CHIP), or any kind of government-assistance plan for those with low incomes or a disability
- ☐ Insurance purchased directly from an insurance company; a broker; or a State or Federal Marketplace, such as Healthcare.gov
- ☐ Veteran's health care (enrolled for VA)
- ☐ TRICARE or other military health care
- ☐ Indian Health Service
- ☐ Any other type of health insurance or health coverage plan – *Specify* ↴

NO, UNINSURED

- ☐ No health insurance or health coverage plan

Results for Test Version 1 vs. Test Version 2

Health Insurance Coverage

Measure	Version That Performed Better
Complete Item Missing Data Rate	No significant difference
Reliability for Uninsured	Test Version 2
Index of Inconsistency (IOI) for VA Coverage (CAPI only)	Test Version 1
Any Coverage Rate	No significant difference
Medicaid (mail only)	Test Version 1
Multiple Coverage	Test Version 2
Write-Ins	Test Version 2

Recommend moving forward with the Test Version 2.

Disability

Control

Test Version

18 a. Is this person deaf or does he/she have serious difficulty hearing?

☐ Yes

☐ No

b. Is this person blind or does he/she have serious difficulty seeing even when wearing glasses?

☐ Yes

☐ No

H Answer questions 19a – c if this person is 5 years old or over. Otherwise, SKIP to the questions for Person 2 on page 19.

19 a. Because of a physical, mental, or emotional condition, does this person have serious difficulty concentrating, remembering, or making decisions?

☐ Yes

☐ No

b. Does this person have serious difficulty walking or climbing stairs?

☐ Yes

☐ No

c. Does this person have difficulty dressing or bathing?

☐ Yes

☐ No

I Answer question 20 if this person is 15 years old or over. Otherwise, SKIP to the questions for Person 2 on page 19.

20 Because of a physical, mental, or emotional condition, does this person have difficulty doing errands alone such as visiting a doctor's office or shopping?

☐ Yes

☐ No

18 a. Does this person have difficulty seeing, even if wearing glasses?

☐ No difficulty

☐ Some difficulty

☐ A lot of difficulty

☐ Cannot do at all

b. Does this person have difficulty hearing, even if using a hearing aid?

☐ No difficulty

☐ Some difficulty

☐ A lot of difficulty

☐ Cannot do at all

H Answer questions 19a – d if this person is 5 years old or over. Otherwise, SKIP to the questions for Person 2 on page 19.

19 a. Does this person have difficulty walking or climbing steps?

☐ No difficulty

☐ Some difficulty

☐ A lot of difficulty

☐ Cannot do at all

b. Does this person have difficulty remembering or concentrating?

☐ No difficulty

☐ Some difficulty

☐ A lot of difficulty

☐ Cannot do at all

c. Does this person have difficulty with self-care, such as washing all over or dressing?

☐ No difficulty

☐ Some difficulty

☐ A lot of difficulty

☐ Cannot do at all

d. Using his or her usual language, does this person have difficulty communicating, for example understanding or being understood?

☐ No difficulty

☐ Some difficulty

☐ A lot of difficulty

☐ Cannot do at all

I Answer question 20 if this person is 15 years old or over. Otherwise, SKIP to the questions for Person 2 on page 19.

20 Because of a physical, mental, or emotional condition, does this person have difficulty doing errands alone such as visiting a doctor's office or shopping?

☐ No difficulty

☐ Some difficulty

☐ A lot of difficulty

☐ Cannot do at all

Disability Results

- Test Version showed significantly higher complete item missing rate of one percentage point, likely due to additional question and response categories.
- Test Version generally had mixed results for response reliability but generally lower GDRs across modes and types for Test Version.
- The percent with disability based on the WG Definition 1 was significantly lower in the Test treatment (8.1%) compared to Control treatment (13.9%) whereas Definition 2 yielded a significantly higher percentage (31.7%).
 - Revised Disability Definition 1 would not be comparable to the current ACS measure.

Definition 1 = “A lot of difficulty” or “Cannot do at all” whereas Definition 2 also includes “Some difficulty”

Recommend moving forward with Test Version and primarily use Definition 1.

Results for Test Version 1 vs. Test Version 2

Income

Measure	Version That Performed Better
Aggregate Reported Income	No significant difference
Break-Even Amounts for Self-Employment	Test Version 1
Missing Data Rate for Interest Income Amount	Test Version 1
Median Income by Occupation	No significant difference
GDR/IOI self-employment income reciprocity	Test Version 2
Net Difference Rate for Public Assistance Income	No significant difference

Test Version 1 performed well but upcoming administrative data analysis will be key to a future recommendation.

SNAP

Control

IN THE PAST 12 MONTHS, did you or any member of this household receive benefits from the Food Stamp Program or SNAP (the Supplemental Nutrition Assistance Program)? *Do NOT include WIC, the School Lunch Program, or assistance from food banks.*

☐ Yes

☐ No

Test Version

In 2021, did you or any member of this household receive benefits from the Food Stamp Program or SNAP (the Supplemental Nutrition Assistance Program)? *Do NOT include WIC, the School Lunch Program, or assistance from food banks.*

☐ Yes

☐ No

SNAP Results

- No significant differences between the Test Version and Control for percentage of households receiving SNAP benefits and missing data rates.

Benchmark	SNAP Receipt Rate (SE)
2022 ACS Content Test - Test	10.9 (0.2)
2022 ACS Content Test - Control	10.7 (0.3)
2022 CPS ASEC (CY 2021)	12.7 (n/a)
2022 Food and Nutrition Service counts	16.9 (n/a)
2021 ACS	12.4 (0.1)
2019 ACS	10.7 (0.1)
Source: U.S. Census Bureau, 2022 ACS Content Test (DRB No. CBDRB-FY23-ACSO003-B0059), 2019, and 2021 ACS 1-year estimates, 2022 CPS ASEC. Food and Drug Administration, 2022 Food and Nutrition Service Counts.	

Test Version performed well but the SNAP recommendation is dependent on the reference period used for the ACS Income questions.

Labor Force

Control

When did this person last work, even for a few days?

- ☐ Within the past 12 months
- ☐ 1 to 5 years ago → SKIP to **M**
- ☐ Over 5 years ago or never worked → SKIP to question 43

a. During the PAST 12 MONTHS (52 weeks), did this person work EVERY week? Count paid vacation, paid sick leave, and military service as work.

- ☐ Yes → SKIP to question 41
- ☐ No

b. During the PAST 12 MONTHS (52 weeks), how many WEEKS did this person work? Include paid time off and include weeks when the person only worked for a few hours.

Weeks

During the PAST 12 MONTHS, in the WEEKS WORKED, how many hours did this person usually work each WEEK?

Usual hours worked each WEEK

Test Version 1

39 When did this person last work for pay, even for a few days?

- ☐ Within the past 12 months
- ☐ 1 to 5 years ago
- ☐ Over 5 years ago or never worked → SKIP to question 44

40 In 2021, did this person work for pay, even for a few days?

- ☐ Yes
- ☐ No → SKIP to question 44

→ NOTE: For question 41a and b, include as WORK:

- ✓ all jobs for pay
- ✓ paid vacation
- ✓ paid sick leave
- ✓ military service

41 a. In 2021 (52 weeks), did this person work EVERY week? Remember to include paid vacation and paid sick leave as work.

- ☐ Yes → SKIP to question 42
- ☐ No

b. In 2021 (52 weeks), how many WEEKS did this person work for at least one day? Include weeks when this person only worked for a few hours.

Weeks

42 In 2021, for the weeks worked, how many HOURS did this person usually work each WEEK? Include all jobs for pay and military service.

Usual hours worked each WEEK

Test Version 2

39 When did this person last work for pay, even for a few days?

- ☐ Within the past 12 months
- ☐ 1 to 5 years ago
- ☐ Over 5 years ago or never worked → SKIP to question 44

40 In 2021, did this person work for pay, even for a few days?

- ☐ Yes
- ☐ No → SKIP to question 44

41 a. In 2021 (52 weeks), did this person work EVERY week? Count paid vacation, paid sick leave, and military service as work. Include all jobs for pay.

- ☐ Yes → SKIP to question 42
- ☐ No

b. In 2021 (52 weeks), how many WEEKS did this person work for at least one day? Include weeks when this person only worked for a few hours. Include all jobs for pay. Count paid vacation, paid sick leave, and military service as work.

Weeks

42 In 2021, for the weeks worked, how many HOURS did this person usually work each WEEK? Include all jobs for pay and military service.

Usual hours worked each WEEK

Labor Force Results

- The Test Versions had a combined 2022 employment-to-pop ratio of 62.0% which nominally compares to the CPS ASEC ratio of 62.9%.
- Test Version 1 item missing rates for internet and mail were either lower or not significantly different compared to Control.
- Test Version 1 had higher reliability for several categories than the Control.
- For the mail instrument, Test Version 2 had lower item missing data rates compared to Test Version 1, and no statistical differences were observed in the response distributions between the two treatments

Recommend moving forward with the Test Version 2 mail instrument without new reference period.

Instructional changes recommended for other modes but reference period change is pending Administrative Data Analysis.

Sewer (new)

Test Version

Is this house, apartment, or mobile home connected to a public sewer?

☐

Yes, connected to public sewer

☐

No, connected to septic tank

☐

No, use other type of system

Sewer/Septic Results

- The Test Version had a nominally lower percentage of households connected to a public sewer (77.0%) than the 2021 AHS (84.5%).
- The difference in overall item missingness between Sewer and the Telephone item was less than a percentage point.
- Public Sewer and Septic Tank responses both had low levels of inconsistency overall.

Recommend adopting the Sewer Test Version.

Electric Vehicles (new)

Test Version 1

Are any of the following types of electric vehicles kept at home for use by members of this household?

a. A plug-in electric vehicle?

☐ Yes

☐ No

b. A hybrid electric vehicle?

☐ Yes

☐ No

Test Version 2

Do you or any member of this household own or lease an electric vehicle? *Include both all-electric and plug-in hybrid electric vehicles.*

☐ Yes

☐ No

Electric Vehicle Results

Measure	Version That Performed Better
Rate of Plug-In Electric Vehicle Ownership	Test Version 2
Index of Inconsistency (IOI)	No significant difference
Complete Item Missing Data Rate	Test Version 2

Recommend moving forward with Test Version 2.

Solar Panels (new)

Test Version

Does this house, apartment, or mobile home use solar panels that generate electricity?

☐ Yes

☐ No

Solar Panels Results

- The Test Version had a nominally higher percentage of housing units with solar panels (4.8%) than the 2021 AHS (3.8%).
- The solar panel item missing data rate for the Test Version was relatively small (2.8%); nominally higher than the 2021 AHS missing rate (0.2%).
- The self-response solar panel reports had lower levels of inconsistency compared to interviewer-administered.

Recommend adopting the Solar Panels Test Version.

Recommendations Summary

Topic	Implement Changes?	Notes
Roster	Yes	
Educational Attainment	Yes	
Health Insurance Coverage	Yes, Version 2	Version 2 on paper is the “Mark all that apply” approach.
Disability	Yes	
Income	No	Evaluate instruction changes with administrative data analysis and make a final recommendation next fall. Reference period implementation pending administrative data use in production.
SNAP	No	Reference period implementation pending.
Labor Force	Partial	Instruction changes can proceed; Reference period implementation pending.
Sewer (new)	Yes	
Electric Vehicle (new)	Yes, Version 2	
Solar Panels (new)	Yes	

Questions for the NAC

- Does the Committee have any specific recommendations for increasing response to the Content Followup reinterview, which was conducted via telephone to measure response error?
- Does the Committee have any recommendations for additional metrics that would be useful for evaluating quality during content testing?